AI Overview

Apple powdery mildew, caused by the fungus Podosphaera leucotricha, appears as white, powdery growth on leaves, shoots, and blossoms, causing curling, distortion, and reduced photosynthesis. The fungus overwinters in buds and becomes active in the spring, spreading via airborne spores. To manage it, you should prune infected shoots during dormancy and the growing season, ensure good air circulation, water thoroughly, and apply appropriate fungicides or organic treatments like lime-sulfur if necessary.

Symptoms

- **Leaves and shoots:** Look for white or grayish-white, powdery spots or patches on the upper or lower surfaces of new shoots and leaves. Infected leaves may curl upwards, appear distorted, and become brittle or stunted.
- **Blossoms:** Infected blossoms may not develop normally and can become greenish-white, leading to no fruit.
- **Fruit:** Fruit can develop a net-like or webbed pattern of russeting (a rough, brownish skin) in infected areas.

Causes and Spread

- **Overwintering fungus:** The fungus overwinters in infected terminal buds of the tree.
- **Primary infection:** In the spring, these infected buds emerge as stunted shoots covered in spores, which then spread to new growth.
- **Secondary infections:** Airborne spores from primary infections can cause new infections on leaves, blossoms, and shoots, repeating the cycle throughout the growing season.
- **Favorable conditions:** The disease is favored by warm days and humid or cool nights, and it does not require moisture to develop.

Management

- **Pruning:** Remove infected shoot tips during winter dormancy and growing season pruning. Destroy the removed material.
- **Air circulation:** Pruning can also help thin out dense growth, improving air circulation and discouraging mildew.
- **Watering:** Keep the tree well-watered and mulched, as infections are worse during drought.
- **Resistant varieties:** Planting less susceptible apple varieties can help prevent the disease.

- **Fungicides:** Apply appropriate chemical or organic fungicides if infections are persistent. Organic options include sulfur-based products or horticultural oils.
- **Cultural practices:** Remove and destroy fallen leaves in the autumn to help break the disease cycle.